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ABSTRACT

In April 1988, the Atlanta (Georgia) Public Schools initiated a plan to reconstruct the history curriculum through the infusion of African and African-American historical and cultural content. The model called for the following activities: (1) staff development; (2) curriculum revision and development; (3) acquisition and development of resources; (4) provision of enrichment activities for students; and (5) community education and involvement. In 1989, the program was piloted across grade levels in 17 schools and in selected classrooms in 7 other schools. As of October 1990, 1,318 staff members had completed the 30-hour training course, and 34 teachers had received 90 hours of training to prepare them to assist in program implementation and curriculum writing. Curriculum learning objectives were written and disseminated. At the end of the pilot year, student outcomes were generally positive, with student knowledge at a slightly higher level in pilot schools than that found in non-pilot schools. Students found the infusion content important, motivating, and a source of pride. The majority of teachers found the program important and considered that students responded favorably. Community education was cited as an area for improvement. Revitalization of the advisory committee, completion of training and curriculum delivery, and more comprehensive assessment of student knowledge and attitudes were recommended. Statistical data are presented in 10 tables. Five appendices provide details of the pilot study and the evaluation methodology. (Author/SLD)

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INFUSION OF AFRICAN AND AFRICAN-AMERICAN HISTORY AND CULTURE INTO THE ATLANTA PUBLIC SCHOOLS' CURRICULUM

EVALUATION REPORT
1988-1990

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December 1990

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ABSTRACT

In April of 1988, the Atlanta Public Schools' (APS) system initiated a plan to reconstruct the curriculum in order to provide a comprehensive, multidisciplinary and accurate representation of human history through the infusion of African and African-American historical and cultural content. The system's infusion model called for intensive staff development, curriculum revision and development, the acquisition or development of resources, the provision of enrichment activities for students, and community education and involvement.

Beginning in September 1989, the Infusion program was piloted across grade levels in 17 schools. An additional seven schools had pilot classrooms. At the elementary level, all subjects were included. In the middle and high schools, only mathematics and social studies courses were included.

As of October 1990, 1,318 staff members had completed the 30-hour intensive training course. Additionally, a training team made up of 34 classroom teachers received 90 hours of training to prepare them to assist in the implementation process and the curriculum writing process.

Curriculum Learning Objectives (CLOs) were written and disseminated in Language Arts, Mathematics, Social Studies, Science, and Music, although the extent to which the Infusion content was included and infused varied dramatically from subject to subject and from grade level to grade level. Resource materials to support the curriculum were purchased after some delay and were disseminated to the schools whose teachers had been trained.

At the end of the pilot year, the student outcomes tended to be positive. Student knowledge was assessed in specified grades and the preliminary data suggest that students in the pilot schools tended to perform at a slightly higher level than did students in the non-pilot schools. Pilot students' perceptions of the program indicated that they found the Infusion content to be important, motivating, and a source of individual and group pride.

Teachers' perceptions were also assessed. The majority of the pilot teachers found the program to be important for students and for themselves personnally and professionally. They reported that students responded to the Infusion content with special interest and showed improvements in self-esteem, group identity, motivation, and group pride.

In the area of community education, two community forums were held. However, the scheduling and marketing of the forums were cited as problems by members of the Advisory Committee. Also, a ten part community education lecture series was produced by WPBA-TV. The series was, however, seriously delayed in its completion.

Recommendations emanating from this report include a systematic review of the curriculum in all areas, a plan to monitor curriculum delivery, completion of training for all staff, revitalization of the Advisory Committee and the community education effort, and a more comprehensive assessment of students' knowledge and attitudes.

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INFUSION OF AFRICAN AND AFRICAN-AMERICAN HISTORY AND CULTURE INTO THE ATLANTA PUBLIC SCHOOLS' CURRICULUM

Evaluation Report
1988-90

PROJECT DESCRIPTION

In April of 1988, the Atlanta Public Schools (APS) system initiated a plan to reconstruct the APS curriculum in order to provide a comprehensive, multidisciplinary and accurate representation of human history through the infusion of African and African-American historical and cultural content. Under the direction of the project's chief consultant, Dr. Asa G. Hilliard, III, the system implemented an adapted version of the infusion model developed in Portland, Oregon Public Schools system in 1981. The APS model called for (1)the identification and training of a cadre of teachers to serve as trainers and resources within their home schools; (2) extensive staff development for all pilot school teachers provided by world-class scholars in the various disciplines; (3) the rewriting of the curriculum in all disciplines infusing the specified content in the appropriate places based on the 10 Organizing Principles and the critical topics for each discipline; (See Appendix A); (4) development and/or acquisition of resource materials to support the curriculum; (5) the provision of special enrichment activities for students; and (6) the implementation of a community education effort.

The Infusion program has been piloted across grade levels in 17 schools. An additional 7 schools had pilot classrooms. A listing of these schools is presented in Appendix B.

The project objectives were:

1. To identify content from African and African-American Studies which should be infused into the regular Atlanta Public Schools curriculum for grades K-12 in all subjects.

2. To rewrite the APS curriculum infusing the identified content in the appropriate places and at the appropriate levels.

3. To train teachers to acquire and demonstrate a basic knowledge of the African-American experience and contributions from both a contemporary and historical perspective.

4. To acquire, evaluate, adapt, and/or develop materials appropriate for utilization in the implementation of the infused curriculum.

5. To enhance individual and group self-concepts of participating staff.

6. To teach students about the African and African-American experience and contributions from both a contemporary and historical perspective.

7. To enhance individual and group self-concept among participating students.

8. To promote parent participation in the schools.

9. To improve community involvement in the schools.

IMPLEMENTATION PROCESS

I. Project Structure

The responsibility for project planning and implementation was placed in the Department of Program Planning and Development in the Division of Instructional Services. While all subject areas were involved, the direct project responsibility was placed with the Coordinator of Social Studies.

Three groups were formed to assist in the planning and implementation of this project: an Advisory Council, a Curriculum Steering Committee, and a Training Team. Their makeup and functions are briefly described below.

A. The Advisory Council was formed in April 1988. This committee was composed of the chief consultant for the project, representatives from the Association for the Study of Classical African Civilizations (ASCAC), community representatives from the Shrine of the Black Madonna, the City of Atlanta, Turner Broadcasting, the M. L. King Center for Nonviolent Social Change, and selected Atlanta Public Schools staff. The Advisory Council was to assist APS staff in the planning of the overall project and to oversee its implementation.

B. The Curriculum Steering Committee, composed of the curriculum coordinators in each subject area, was charged with the direct responsibility for developing, adapting, and/or writing Curriculum Learning Objectives (CLOs) which reflect the 10 Organizing Principles set forth in the Infusion model. The curriculum was to be revised in all subject areas.

C. The Training Team, composed of one teacher from each pilot elementary school and two teachers (1 math, 1 social studies) from each pilot middle and high school, was formed in February 1989. These teachers participated in intensive staff development to prepare them to act as resources within their home schools. Additionally, this team held weekly working sessions during which they conducted research, crystallized infusion content, wrote curricula and model lesson plans, and reviewed and developed support materials.

Appendix C lists the members of these three bodies.

II. Project Plans

Project planning and development began in April 1988 with the initial meeting of the Advisory Council. Over the next 14 months, the groundwork was laid for project implementation which was scheduled to begin as a pilot in September 1989. Among the tasks accomplished were:

- the establishment of the Curriculum Steering Committee and the Training Group
- the designation of tasks and timelines
- the planning of an extensive staff development program
- the identification and acquisition of project materials and resources
- the development of curriculum and sample lesson plans
- the planning and initial production of a lecture series to be aired on WPBA-TV

While the Infusion CLOs were to be included in the curriculum for all students across subject areas and grade levels by September 1989, staff training was

scheduled to be done in phases over a three-year period (1989-1992). By September 1992, all APS schools and support staff are to have received full staff training. "Full" staff training is defined as 60 percent or more of a school's faculty receiving at least 30 hours of Infusion staff development.

The training of Atlanta Public Schools faculty, staff, and administrators in African and African-American history and culture was a critical component of the project, since exposure to the specified content was a prerequisite for developing, writing, and delivering the revised curriculum. The Infusion model, then, required that the staff development sessions be provided by world-class scholars who are knowledgeable of their academic disciplines from both traditional and Africentric perspectives. In addition to direct exposure to these scholars, the training utilized, as its foundation text, the African-American Baseline Essays which were originally developed by Portland Public Schools.

In an effort to inform parents and other community members of the Infusion program, and to provide the community with exposure to information on African and African-American history, a monthly lecture series presented on WPBA-TV and a series of community forums were planned.

Project plans also included the development and coordination of a series of student activities and cultural presentations designed for the pilot schools.

PROJECT OUTCOMES

The outcomes reported here were derived from four information sources: (1) a critical review of the curriculum learning objectives in language arts, mathematics, science, and social studies, and music; (2) a series of objective tests administered to pilot school students and non-pilot school students, (3) questionnaires administered to Advisory Council members, Curriculum Steering Committee members, trainers, pilot school teachers, and pilot school students, and (4) reviews of project records and documents.

I. Curriculum

A. Curriculum Learning Objectives (CLO) on African and African-American historical and cultural content were infused into the curriculum in mathematics, social studies, language arts, science, and music. There is broad variation, however, in the extent to which the 10 Organizing Principles and critical topics are addressed. (The CLO documents for Art have not yet been developed.)

1. Mathematics

The K-8 CLO documents contained from 3 to 7 Infusion objectives per grade. In the high school CLO documents, 2 basic Infusion objectives were contained in each of the 12 courses. Additionally, a supplement containing 33 objectives was developed by the Math Coordinator and the Math Infusion Committee. The supplemental document indicates that "topics should be integrated into the regular mathematics curriculum where they most appropriately fit."

The mathematics CLOs as a whole cover both of the identified critical topics and many of The Organizing Principles and Recurring Themes.

2. Social Studies

The number of Infusion objectives contained in the CLO documents in grades K-5 ranged from 18 to 52. In the high schools, Infusion objectives are contained in all courses reviewed. Extensive coverage of the Organizing Principles, Recurring Themes, and Critical Topics is found in the K-12 series.

3. Language Arts

In grades 2, 4, and 7, a range of 3-12 Infusion Objectives is contained in the CLO documents for the first semester. On the high school level, while some specified readings are about the African or African-American experience or are authored by Africans or African-Americans, no objectives are designated as Infusion objectives in the CLO documents. The following statement is made in these documents: "All literature objectives are appropriate for infusing African-Americ[illegible] concepts into the curriculum when they are applied to African-American literature." Only 1 of the 5 critical topics in this area is explicitly included in these CLO documents.

4. Science

The CLO documents in science contain 1 infusion objective for each of grades K, 1, 3, 4, and 5 and 2 objectives for grade 2. On the high school level, 2 objectives are included for Biology and none are designated in Physical Science, Chemistry, or Human Biology. None of the Organizing Principles, Recurring Themes, or Critical Topics and Subtopics is sufficiently addressed.

5. Music

The CLO documents in music contain a range of 11 to 22 Infusion objectives for grades 1-7. The Critical topics in music were addressed in these documents.

Sample CLOs can be found in Appendix D.

B. Instructional materials designed to support the curriculum were developed or purchased. The project's foundation text, African-American Baseline Essays, was purchased and distributed to each trained faculty member and to the appropriate central and area staffs.

Additionally, each school was provided with supportive materials, including books, filmstrips, video and audio cassettes, map kits, African picture stories, and teacher's guides. Media specialists within the schools have been asked to identify the "Infusion" materials in their libraries to facilitate use by teachers. The system's Professional Library has also expanded its acquisitions on the African-American experience. To date, approximately 800 titles and audio-visual materials have been received and are available for teachers to utilize. In order to increase accessibility, multiple copies of some titles have been purchased. In addition, the Library has purchased

subscriptions to several journals and periodicals which specialize in the study of African and African-American history and culture. Lists of these resources have been published by the Professional Library and distributed to all schools.

C. CLO tests were administered to specified grade levels at four times throughout the 1989-90 school year. Test items over selected Infusion CLOs were included as a four or five item supplemental test in the following grades and subjects:

Grade 3 - Social Studies
Grade 4 - Reading
Grade 5 - Reading
Grade 7 - Mathematics

Grades 9-12 - Mathematics

These CLO tests were administered systemwide, thus, including pilot school students and students not in pilot schools. This process permitted a comparison of the knowledge of pilot students on the specified Infusion CLOs with the knowledge of non-pilot students. It should be noted that the Infusion CLOs were a part of the curriculum for all students. Pilot schools, however, received training, resources, and an overall school focus on the Infusion content, while non-pilot schools did not.

Table 1 shows a comparison of the performance of pilot school students with the performance of non-pilot school students. Schools with single pilot classrooms were not included in this comparison. It is important to note that these data are limited by the small number of items in each supplemental test, and can, therefore, only be viewed as preliminary and suggestive.

TABLE 1

COMPARISON OF PERFORMANCE OF PILOT VS NON-PILOT SCHOOL STUDENTS ON A SAMPLE OF INFUSION CLOs 1989-90

Grade	Subject	Full Pilot Schools		Non Pilot Schools	
		N	Average Number Correct/Total	N	Average Number Correct/Total
3	Social Studies	8	2.5/4*	71	2.06/4*
4	Reading	9	2.9/4	74	2.8/4
5	Reading	9	3.22/4	74	2.89/4
7	Mathematics	4	2.75/5	31	2.67/5
Grades 9-12	Mathematics	4	1.25/4*	9	.44/4*

*Statistically significant difference ($p < .05$)

The performance of pilot students tended to be slightly higher than non-pilot students; however, the differences were statistically significant only for the third grade social studies test, and the high school mathematics test.

The high school mathematics results are summarized across 11 courses. Several trends emerged in these data which are worthy of recognition:

1. Of the four full pilot high schools, the performance of Carver and Harper students was consistently higher than the performance of Douglass and Brown students.

2. While the three high schools with pilot classrooms were not included in the test summary in Table 1, it was found that the performance of students at Therrell and Mays tended to be as high as the full pilot school performance.

In high school social studies, the pilot/non-pilot distinction was not made because the training in this area was more extensive and included chairpersons and contact teachers from all schools. Student performance on the infusion items was:

N	Average Number Correct/Total
16 schools	9.06/13

Overall, the pilot testing process was satisfactory, but could be improved by moving from supplemental testing to a more extensive assessment with the items infused into the regular course/subject tests.

II. Staff Training

By the end of June 1990, 1,318 staff members had been trained. Table 2 shows the training schedule and attendance.

TABLE 2

INFUSION TRAINING SCHEDULE AND ATTENDANCE

Training Dates		Number of Faculty/ Staff Trained	
		Teachers	Administrators
Phase I	June 20-29, 1989 August 14-18, 1989	29 296	33 0
Phase II	January 18-27, 1990 and February 1-3, 1990	590	19
Phase III	June 18-21, 1990	218	0
Phase IV	October 20, 22-26, 1990	185	0
	TOTAL	1,318	52

The training was done according to the model, utilizing national scholars in the various subject areas, consultants from Portland Public Schools,

strategy/methodology group sessions by content area and level, lesson planning workshops, and demonstration lessons. The project's Training Team received 90 hours of intensive staff development and pilot school staffs received 30 hours of training. A listing of the national scholars can be found in Appendix E.

In October 1989 and again in November 1990, the system co-sponsored a national conference with Georgia State University and the Southern Education Foundation. The conferences, entitled "National Conference on the Infusion of African and African-American Content in the School Curriculum: Theories, Issues, Strategies, Models, Materials, Network," and "The Infusion of African and African-American Content in the School Curriculum," respectively, were attended by educators and other professionals from across the country. In addition to providing training for over 150 Atlanta Public Schools' faculty and staff, these conferences placed Atlanta's program in the position of being recognized as a national model.

Other staff development activities included:

1. "Black Art: Ancestral Legacy"
   July 23 - August 2, 1990
   High Museum
   50 hours of training for 25 teachers

2. Introductory training
   August 21, 1990
   Harper High
   1 hour of training for social studies contact teachers (K-12)

3. Staff development course
   The Staff Development Office offers a course entitled "Infusion of Black Studies."

At this point, all but 22 schools have received full training. As indicated earlier, 60 percent of the school's designated faculty had to be trained in order for the school to be considered fully trained. It should be noted that only mathematics and social studies teachers on the middle and high school levels have been trained. All training is to be completed by Fall 1992.

III. Special Student Activities

During the 1989-90 school year, the pilot schools were provided with a series of special programs and cultural presentations. The following programs were presented:

Activity	Participants
1. "Queens of the Nile Now" A dramatic presentation of ancient African royalty	17 pilot schools
2. "Dialogues in the Diaspora" Segment 1: Statsasonic, A.F.R.I.C.A.	7 pilot high schools
3. African-American Panoramic Experience (APEX)	76 schools

Free admission to APEX was provided by the Infusion program for all APS schools in the 1989-90 and 1990-91 school years. By the end of the 1989-90 school year, 76 schools had attended.

These student activities were coordinated centrally and were provided to participating schools systemwide. Individual school activities reportedly were extensive and varied.

IV. Community Involvement and Education

A. The Advisory Council, which is composed of various community representatives, has been in place since the beginning of this project. Since its initial meeting in April 1988, the Council has met twice in each school year (December 14, 1988; March 7, 1989; December 1, 1989; and April 27, 1990). The latter two meetings were held in conjunction with the Community Forums.

B. Two community forums have been held. These forums were designed to increase parent involvement by informing and educating parents and community members in the Infusion process and content. The programs included a project overview, student exhibits and presentations, teaching demonstrations, video presentations, topical discussions, and cultural performances. The forum dates and locations are given in Table 3.

TABLE 3

COMMUNITY FORUM SCHEDULE

Dates	Time	Place
FORUM 1 Friday, Dec. 1, 1989 Saturday, Dec. 2, 1989	 12:00-4:00 p.m. 9:00-2:00 p.m.	Harper High
FORUM 2 Friday, April 27, 1990	9:30 a.m.-11:30 a.m.	Crim High

C. The lecture series entitled "African/American Culture: A Second Look," was produced by WPBA. The system contracted with Ms. Marti Chitwood to serve as Talent Producer. The original goal to produce and to air the series during the 1988-89 school year was only partially attained. Only four segments were completed in the 1988-89 school year. Segments 5-8 were completed by fall 1990. Segments 9 and 10 had not been completed at the time of this report.

The planned viewing schedule is presented in Table 4.

TABLE 4

PUBLIC VIEWING SCHEDULE		
Part 1	Friday 2-24-89	6:30 PM
Part 2	Friday 3-31-89	6:30 PM
Part 3	Friday 4-28-89	6:30 PM
Part 4	Friday 5-26-89	6:30 PM
Part 1	Sunday 11-4-90	6:30 PM
	Friday 11-9-90	6:30 PM
Part 2	Sunday 11-11-90	6:30 PM
	Friday 11-16-90	6:30 PM
Part 3	Sunday 11-18-90	6:30 PM
	Friday 11-23-90	6:30 PM
Part 4	Sunday 11-25-90	6:30 PM
	Friday 11-30-90	6:30 PM
Part 5	Sunday 12-2-90	6:30 PM
	Friday 12-7-90	6:30 PM
Part 6	Sunday 12-9-90	6:30 PM
	Friday 12-14-90	6:30 PM
Part 7	Sunday 12-16-90	6:30 PM
	Friday 12-21-90	6:30 PM
Part 8	Sunday 12-23-90	6:30 PM
	Friday 12-28-90	6:30 PM
SCHOOL SCHEDULE		
Part 1	Tuesday 9-5-89	2:30 PM
Part 2	Wednesday 9-6-89	2:30 PM
Part 3	Thursday 9-7-89	2:30 PM
Part 4	Friday 9-8-89	2:30 PM

In addition to being aired on WPBA-TV, Parts 1-4 were utilized in staff development, and copies of Part I were provided to all pilot middle and high schools.

D. In December 1990, the system developed a Kwanzaa resource guide, which was disseminated to students in 9 classrooms. The guide provided information on the origins and practice of the African-American holiday of Kwanzaa.

IV. Participant Perceptions

Questionnaires were administered to the Advisory Council, the Curriculum Steering Commitee, the Training Team, pilot school teachers, and pilot school students. Summaries of the perceptions of these groups are presented below.

A. Committee Perceptions

Questionnaires were distributed to 15 Advisory Committee members, 13 Curriculum Steering Committee members, and 34 members of the Training Team in November 1989. Their response rates were 40 percent, 69 percent, and 50 percent, respectively. In addition to assessing their role perceptions, the questionnaires were designed to assess their perceptions of program strengths and problem areas, and expected staff and student outcomes. Because the three groups represent differing vantage points, their assessments of strengths and weaknesses have not been collapsed into one summary. Table 5 presents a summary of perceived program strengths and problem areas.

TABLE 5

COMMITTEE PERCEPTIONS OF PROGRAM STRENGTHS AND PROBLEM AREAS

PROGRAM STRENGTHS
Advisory Committee 1. Level of support from top administrators and the Board 2. Use of World-class scholars in the staff training Curriculum Steering Committee 1. The comprehensive and intensive training process 2. The extent of involvement of all levels within the school system and all sectors of the community Training Team 1. The quality of the consultants 2. The fact that infusion makes it easier to teach comprehensively 3. The level of enthusiasm 4. The fact that the program builds on teachers' existing knowledge
PROBLEM AREAS
Advisory Committee 1. Lack of community involvement, poor marketing of program to the Atlanta community 2. Community activities (lecture series and forum) scheduled (time and place) at system's convenience and not the community's convenience 3. Advisory Council not utilized 4. Lack of progress on the TV lecture series 5. Delayed provision of support materials to schools 6. Special workshop(s) not planned for members of the Board of Education Curriculum Steering Committee 1. Need for ongoing school-based staff development 2. All subject areas not included (i.e., health and physical education, foreign languages) 3. Resource materials not readily accessible when needed Training Team 1. Lack of an organized method of placing materials in schools 2. Confusion about pilot school/pilot classroom designation 3. Poor communications regarding trainer compensation and meeting logistics 4. Failure to provide trainees with support (i.e., released time, copier services, etc.) to carry out assigned tasks 5. Lack of specific subject area inservice 6. Failure to recognize and more fully use the expertise of African American Studies scholars who are APS employees 7. Failure to involve the training team in program planning 8. Lack of accountability regarding qualifications of trainers 9. Failure of system to scrutinize textbooks for cultural appropriateness 10. Failure of system to demand cultural inclusion in textbooks purchased by system

The three groups reported essentially the same expectations for students, staff, and community outcomes. These are presented in Table 6.

TABLE 6

COMMITTEES' EXPECTED OUTCOMES

Expected Student Outcomes

1. Accurate and authentic knowledge of African and African-American History
2. Pride in African heritage
3. Increased motivation
4. Awareness of the contributions made by people of African descent to the world
5. Increased individual and group self-respect and self-esteem

Expected Staff Outcomes

1. Higher expectations for students
2. Knowledge of African and African-American history and the inspiration to learn more
3. Appreciation for the value of the infusion content for students
4. Knowledge of and commitment to the program's 10 Organizing Principles and Critical Topics
5. Commitment to projecting positive images of black people, including serving consciously as role models
6. More team teaching and sharing of ideas, resources, and techniques

Expected Community Outcomes

1. Increased willingness to be active in schools
2. Increased knowledge of African and African-American history and culture
3. Pride in our children, our schools, and our communities
4. Pride in African heritage
5. Inspiration to move to higher levels of achievement
6. Increased individual and group self-respect and self-esteem

B. Teacher Perceptions

The teacher questionnaire was completed by 297 teachers in May 1990. All teachers in the elementary pilot schools, and social studies and mathematics teachers in the pilot middle and high schools were asked to complete the instrument. The numbers of completed questionnaires received in each category are given in Table 7.

TABLE 7

PROPORTION OF RESPONSES BY TEACHER LEVEL AND SUBJECT

Level/Subject	N	%
Elementary	145	49
Middle School Math	29	10
Middle School Social Studies	26	9
High School Math	22	7
High School Social Studies	31	10
Level Not Indicated	44	15

The 26-item questionnaire covered 8 general areas. The results are summarized in Table 8. The percent (%) column represents responses for the total teacher group of 297. When the responses of a particular teacher level/subject are noteworthy, they are included in parentheses, using the following abbreviations:

E - Elementary Teachers Only
MM - Middle School Math Teachers Only
MSS - Middle School Social Studies Teachers Only
HM - High School Math Teachers Only
HSS - High School Social Studies Teachers Only

TABLE 8

TEACHER QUESTIONNAIRE RESULTS
(N = 297)

AREA	ITEM	%
Perceived value of program for students	1. Critical 2. Beneficial 3. Not Beneficial	37 43 4
In-service training	1. Attended systemwide training 2. Received in-service within school 3. Received no training 4. Training was sufficient	65 10 11 42
Baseline Essays	1. Had read all of the Baseline Essays 2. Had read some of the Baseline Essays 3. Had read none of the Baseline Essays (MSS - 27%)	12 59 16
Infusion CLOs	1. CLOs not well integrated into regular curriculum (MM - 76%) (MSS - 65%) (HM - 86%)	46

TABLE 8 (Continued)

TEACHER QUESTIONNAIRE RESULTS*

AREA	ITEM	%
Infusion CLOs (continued)	2. Taught all of the Infusion CLOs (E - 8%) (MM - 0%) (MSS - 0%) (HM - 41%) (HSS - 0%)	7
	3. Taught none of the Infusion CLOs (E - 14%) (MM - 55%) (MSS - 23%) (HM - 9%) (HSS - 6%)	17
Materials	1. Materials were readily accessible	28
	2. Had to locate the identified materials myself - (MM - 45%) (HM - 77%) (HSS - 45%)	34
	3. Could not locate materials	13
	4. Materials not identified	8
Student Response and Outcomes	1. Students responded to lessons with interest	66
	2. Students responded to special Infusion activities with interest	69
	3. Level of student involvement in special Infusion activities	
	-high	28
	-moderate	17
	-minimal	33
	-none	5
	4. Proportion of students impacted by the program	
	-all	13
	-most	35
	-a few	28
	-none	9
	5. Positive changes in:	
	-individual self-esteem	56
	-group identity	61
	-motivation	53
	-achievement	41
	-group pride	55
	-need to learn more	62

TABLE 8 (Continued)

TEACHER QUESTIONNAIRE RESULTS

AREA	ITEM	%
Value of Program for Staff	1. Moderate to extensive professional growth (E - 64%) (MM - 20%) (MSS - 43%) (HM - 68%) (HSS - 64%)	50
	2. Moderate to extensive personal growth (E - 67%) (MM - 20%) (MSS - 46%) (HM - 78%) (HSS - 68%)	53
Needs	1. More resource and instructional materials	71
	2. More demonstration lessons	53
	3. More specialized in-services (by subject) (E - 61%) (MM - 31%) (MSS - 62%) (HM - 82%) (HSS - 65%)	53
	4. More general inservice (across subjects)	40
	5. More Special Student Activities	61

C. Student Perceptions

Student questionnaires were administered to all pilot school students in May 1990. Two questionnaires were utilized -- a 9-item instrument for grades 1-3 and a 14-item instrument for grades 4-12. Table 9 presents the results of the grade 1-3 questionnaire and Table 10 presents the results of the grade 4-12 questionnaire.

TABLE 9

STUDENT QUESTIONNAIRE RESULTS
GRADES 1-3 (N = 1,170)

	Percent of Total Group
1. Learned about Africa this year	93
2. Would like to visit Africa	72
3. Knew that Africans built the first cities	76
4. Thought that Columbus discovered America	59
5. Knew that Africans built the pyramids	83
6. Liked learning about Africa	93
7. Wanted to learn more about Africa	94

TABLE 10

STUDENT QUESTIONNAIRE RESULTS
GRADES 4-12 (N = 7,988)

	Percent of Total Group (N = 7,988)	Percent of Subgroups		
		Elem. (N = 1,074)	Middle (N = 3,088)	High (N = 3,826)
1. Judged that Infusion content was good or critical information to know.	88	95	87	86
2. Learned a lot this year about African and African-American history and culture.	53	71	64	46
3. Judged that Infusion lessons were more interesting than regular lessons.	79	87	77	88

TABLE 10 (Continued)

STUDENT QUESTIONNAIRE RESULTS
GRADES 4-12 (N = 7,988)

	Percent of Total Group (N = 7,988)	Percent of Subgroups		
		Elem. (N = 1,074)	Middle (N = 3,088)	High (N = 3,826)
4. Learned Infusion content in science classes.	23	47	15	22
5. Learned Infusion content in math classes.	23	32	19	23
6. Learned Infusion content in language arts classes.	33	58	19	37
7. Learned Infusion content in social studies classes.	81	89	84	77
8. Judged that the knowledge they gained about African and African-American history and culture made them:				
a. feel better about themselves	70	77	63	74
b. feel better about black people	76	83	74	76
c. more interested in school	51	65	45	51
d. want to learn more	73	79	68	75
e. proud to be black	74	81	66	79
9. The thought of Africa made them feel:				
a. proud	48	56	43	50
b. sorrowful	18	16	18	19
c. embarrassed	3	5	3	2
d. ashamed	2	3	3	2
e. no feeling	18	16	24	14
10. Overall rating of the Infusion Program at their schools:				
a. excellent	22	49	22	14
b. good	28	26	30	27
c. average	25	14	26	27
d. poor	13	5	11	17

SUMMARY

The Infusion Project is a major undertaking involving curriculum reconstruction, extensive staff development, and commitment to an innovative and promising direction in the education of urban youth. The project has made considerable progress toward achieving many of its objectives.

Curriculum

Curriculum Learning Objectives have been written and disseminated in Language Arts, Mathematics, Social Studies, Science, and Music, although the extent to which the Infusion content is included and infused varies dramatically from subject to subject and from grade level to grade level. There did not appear to be a systematic review process for the final CLO documents in all subject areas. Given that the Infusion curriculum is the backbone of the program, it is critical that it meet the program's standards of comprehensiveness, authenticity and continuity around the 10 Organizing Principles and the Critical Topics.

At the time of this review, the social studies CLO's appeared to be the most comprehensive and continuous. All of the critical topics and Organizing Principles were included in the K-11 series. The mathematics CLOs met this standard also, when the supplemental CLO listing is considered. The supplemental objectives, however, are not yet infused into the regular course content. In Language Arts, the Infusion objectives are not explicitly identified, although African and African-American literature resources are provided. In science, which is a critical and well-researched area, the extremely limited number of Infusion objectives represents a sizeable and serious omission. This void in science is apparent across grade levels (K-12).

Resource materials to support the curriculum have been purchased and, after some delay, have been disseminated to schools whose faculties have been trained. The system's Professional Library is also building a considerable collection of related materials. The teachers' access to materials, however, was cited as a problem.

Student Outcomes

The pilot school students' perceptions of the program were generally positive. Over 70 percent of the students in grade 1-3 reported that (1) they had learned about Africa during the school year, (2) they liked learning about Africa, (3) they would like to visit Africa, and (4) they wanted to learn more about Africa. Over 70 percent of students in grades 4-12 indicated that (1) the Infusion content was good or critical information to know, (2) Infusion lessons were more interesting than regular lessons, (3) the knowledge they gained about African and African-American history and culture made them feel better about themselves, made them feel better about black people, made them proud to be black, and made them want to learn more. Less than half of the students indicated that they had been exposed to Infusion content in science classes, mathematics classes, and language arts classes. Over 80 percent indicated that they had learned about African and African-American history and culture in social studies classes. Middle school students were least likely to report that they had been exposed to Infusion content. This perception is consistent with middle school teachers' responses regarding their training, the proportion of Infusion CLOs which they covered, and the professional and personal value of the program to them.

The process for assessing students' knowledge of the Infusion curriculum content was piloted. Supplemental "Infusion" items were administered as part of the regular CLO and uniform course testing. The preliminary data suggest that pilot school students tended to perform better than did non-pilot school students (especially in elementary school social studies and high school mathematics). The testing process was satisfactory; however, in order to produce more valid and conclusive data, the testing must be more extensive and should be infused into the body of the regular course/subject tests.

Staff Development and Perceptions

The staff development effort, which is critical to the project's success, was implemented as planned. The 1,318 participating staff members received training from top scholars in their respective fields and from educators with experience in the Infusion process. Training is scheduled to continue through the Fall of 1992. To date, there are 22 schools which have not yet received full training. Additionally, only mathematics and social studies teachers in the pilot middle and high schools have been trained. All of the committees (Advisory Council, Curriculum Steering Committee, and Training Team) identified the training as a program strength. Nonetheless, the following needs were also identified: specific subject area inservice, workshop(s) specifically for the Board of Education, inclusion of all subject areas, and required training for central and area staffs.

The majority of pilot school and pilot classroom teachers indicated that: (1) the Infusion program was beneficial or critical for students, (2) they had read some, but not all of the Baseline Essays, (3) the CLOs were not well integrated into the regular curriculum (in middle schools and in high school mathematics), (4) students responded to Infusion lessons and activities with special interest, (5) students showed positive changes in self-esteem, group identity, motivation, and group pride, (6) they experienced moderate to extensive professional and personal growth (with the exception of middle school teachers) and (7) they need more resources, demonstration lessons, subject area in-service, and special student activities.

Community Involvement

The Community Involvement and Education aspect of this project appears to be the least well developed component. While the Advisory Council was formed very early in the life of the project and has met five times, the last three meetings were not perceived by the council to be working meetings designed for discussion and input. Rather, they were perceived as presentations made to the Council with little or no time for discussion. Thus, the Council perceived itself to be underutilized by program planners. The two community forums, while perceived to be of good content, drew criticism around issues of community accessibility (time and place) and community awareness. The lecture series produced by WPBA-TV30 was seriously delayed in its scheduled completion. This series was to have been a primary conduit for commuity education. However, its impact thus far has been limited. Four of the series' ten segments have been disseminated to the pilot middle and high schools for classroom use. The 10-part series was completed in the fall of 1990 and was aired in November and December as a weekly series.

RECOMMENDATIONS

1. The K-12 CLOs in all subject areas should be reviewed by an Infusion Curriculum Review Committee composed of selected Atlanta Public Schools' staff who were not involved in writing the curriculum, but who have been trained in the Infusion content and process. This committee should also include selected external reviewers who are knowledgeable in the specific content areas.

2. A monitoring process should be developed to assess the extent and quality of curriculum delivery.

3. The staff development effort should continue until all schools have been trained in all of the specified content areas. Participation of area and central level administration involved in instruction should be strongly encouraged, if not required. Currently, there are key administrators who have not gone through the complete training process. Special attention should be directed toward middle school training and implementation.

4. The Community Involvement and Education component should be revitalized. The forums should be publicized and logistically arranged to encourage community participation. The lecture series should be publicized, aired during prime viewing times, and made available to churches, professional organizations, social and civic groups, private schools, etc. for public viewing.

5. The actual functioning of the Advisory Council should be re-aligned with its intended role. A clear articulation of that role appears to be warranted.

6. Evaluation of the Infusion CLOs should be included in the regular CLO and uniform course testing. Items assessing these objectives should be identified so that specific analyses of students' knowledge in this area can be conducted.

7. One of the program's goals pertains to the individual and group self-concepts of students. Currently, no uniform assessment of these constructs is conducted. It is recommended that a systemwide assessment of self-concept be administered at the beginning and end of each school year, thus providing needed evaluation data annually and longitudinally.

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APPENDICES

A. Ten Organizing Principles and Critical Topics

B. Pilot Schools

C. Advisory Council, Curriculum Steering Committee, Training Team Membership

D. Samples of the Infusion Curriculum Learning Objectives

E. Listing of National Scholars

APPENDIX A

Organizing Principles and Critical Topics

Appendix A

TEN ORGANIZING PRINCIPLES

The central African and African American Story line to be illustrated simultaneously in several academic areas is as follows:

1. Africa is the cradle of **Early Man**, of all six early hominids.
2. Africa is the cradle of **Modern Man**, Homo sapien sapien.
3. Africa is the cradle of civilization.
4. Africa once held a position as world teacher, including the teacher of the western world.
5. There was and still is a continent wide cultural unity that overrides superficial appearances of cultural diversity in Africa.
6. The first African movement **throughout the world** came as a result of a series of migrations, and these took place over thousands of years.
7. Africa has been under siege for nearly 2,000 years, and only most recently from European slavery and colonization. Asiatics, Greeks, Romans, Asiatics under Islam, and lastly Europeans have taken turns invading and sometimes colonizing the African continent.
8. There is an African diaspora all over the world today.
9. African people have resisted domination stubbornly on the continent and in the diaspora.
10. Even under slavery, colonization, and segregation/apartheid, African people have made monumental cultural contributions in the arts, sciences, humanities, politics, and in every facet of the human experience.

RECURRING THEMES

- Early civilization evolved in Africa; Africa is the cradle of civilization.
- Egypt was, and still is, a significant African civilization.
- People of African descent have a history that precedes slavery and civil rights.

- The culture of African people was not destroyed by slavery.
- Cultural unity is evident among African people(s) on the continent of Africa and throughout the world.
- Even under slavery, colonization, and segregation, African/African-American people have made significant cultural contributions in the arts, sciences, humanities, politics, and other facets of the human experience.
- Many people have been victims of misinformation about Africa and the distortion of the history, culture, and contributions of African/African-American people.

SOCIAL STUDIES

Critical Topics

1. Africans are the oldest people on earth.
2. Ancient Egypt was an African civilization.
3. Africans participated in early trade and exploration.
4. Great African civilizations emerged along the Niger River (e.g., Mali, Ghana, Songhay)
5. Africans, today, practice both traditional and Western lifestyles.

SCIENCE

Critical Topics

1. Science is a culturally driven process leading to information based on a particular scientist's point of view.
2. Science can be the observation and/or the experiencing of events or phenomena.
3. Africans have contributed much to the scientific knowledge based both in science and technology.

Subtopics:

a. Anthropology: Life evolved from the east coast of Africa and the early African lifestyle was advanced.

b. Astronomy: Africans made a significant contribution to the study of astronomy.

c. Physics: Early African writings indicated a possible understanding of quantum physics and gravitational theory.

d. Medicine: Early Africans had an understanding of herbal medicines and possibly understood surgical techniques.

e. Geology: Early African artifacts and writings show an understanding of sedimentation, hydrology and evolution.

f. Measurement: Africans developed and used symbolic writing, the nilometer, geometry, architecture, spatial relationships, base seven numerology, cubits and palms.

g. Biographies: Essays on the following scientists: Banneker, Carver, Latimer, Just, Drew, Taylor, Johnson, Imes, Reed, Stokes, Spight, Cowings, Whatley and Dubois.

MATHEMATICS

Critical Topics

1. The African Contributions to the development of mathematics are fundamental and extensive, e.g., the pyramids, Egyptian numbering system, Ahmose (Moscow) papyrus.

2. Pythagoras and other outstanding Greek scholars studied mathematics in Africa, a center of learning during that era.

LANGUAGE ARTS

Critical Topics

1. African proverbs, like those worldwide, are used to summarize and preserve ancestral wisdom.

2. African systems of communication are diverse and symbolic, e.g., drum, songs, dance/gestures, games, rituals, oral storytelling, literature, artifacts.

3. The African oral tradition is a valid one and is the basis of a rich public language style in use today.

   Some of its characteristics are: repetition of words and structural patterns, call and response motif, rhythmic cadence, variation in pitch, dramatic gesture and movement, extemporaneous additions to planned speech. Public speakers such as Rev. Martin Luther King, Jr., Barbara Jordan, and Jesse Jackson provide examples.

4. The linguistic heritage of African people survived slavery in America and continues to influence speech patterns and communication styles in African-American homes and communities. Verbal quickness and metaphor are valued characteristics in speech.

5. The African world view is often reflected in the literary works of African and African-American writers. Typical features include themes of personal relationships and community (the collective world experience).

ART

Critical Topics

1. African art represents a collective reality which is expressed through its symbolism and world view.

2. African art broadens the concept of what art is. It reflects an attitude or process beyond simply making an art object.

3. When one views African-American art, there is evidence of cultural continuity from Africa to the Americas.

MUSIC

Critical Topics

1. Music from the African and African-American tradition has had an influence on music throughout the whole.

2. In the African tradition, no distinction exists between music and everyday aspects of life (e.g., ceremonies, work, dance, etc.) for music becomes a part of the whole.

3. Music derived from the African tradition adheres to fundamentals such as:

   - melody dependence on speech tone
   - collective and group improvisation
   - frequent use of call and response patterns
   - harmony
   - polyrhythmic and cross-rhythmic organization
   - community participation
   - group and self criticism.

APPENDIX B

Pilot Schools

Appendix B

1989-90 PILOT SCHOOLS

Elementary

1. Campbell Elementary
2. East Lake Elementary
3. English Avenue Elementary
4. Hubert Elementary
5. Anne E. West Elementary
6. Whitefoord Elementary
7. Fickett Elementary
8. Lin Elementary
9. Dobbs Elementary

Middle

1. Inman Middle
2. King Middle
3. Southwest Middle
4. Sutton Middle

High

1. Brown High
2. Carver High
3. Douglass High
4. Harper High

SCHOOLS WITH PILOT CLASSROOMS

1. Cleveland Avenue Elementary
2. Continental Colony Elementary
3. Bunche Middle
4. Coan Middle
5. Mays High
6. West Fulton High
7. Therrell High

APPENDIX C

Committee Members

Appendix C

AFRICAN-AMERICAN INFUSION COMMITTEES

I. Curriculum Steering Committee

Dr. Myrtice M. Taylor
Dr. Mae Kendall
Ms. Gladys Twyman
Ms. Fay Ross
Dr. Nancy Amuleru-Marshall
Ms. Frances Culpepper
Dr. Weyman Patterson
Dr. Regina Johnson
Ms. Mary Frances Early
Mr. Chuck Hacker
Dr. Mary Armstrong
Mr. David Walker
Dr. Blanche Hamilton
Mr. Harold Head
Ms. L'Tanya Sloan

II. Training Team

Ms. Joyce Beachum	-	Cleveland Avenue Elementary
Ms. Allie Bell Harrison	-	Campbell Elementary
Ms. Bertha Greene	-	Whitefoord Elementary
Ms. Louise Hill	-	Dobbs Elementary
Ms. Barbara Bankston	-	East Lake Elementary
Ms. Sharon Willis	-	English Avenue Elementary
Ms. Jean Massey	-	Hubert Elementary
Ms. Diana Spencer	-	Lin Elementary
Ms. Choquita McGriff	-	Anne E. West Elementary
Mr. Cornelius Watts	-	Woodson Elementary
Ms. Edna Jordan	-	Fickett Elementary
Ms. Pamela Patterson	-	Continental Colony Elementary
Ms. Carolyn Huff	-	Bunche Middle
Ms. Sheila Stowers	-	Bunche Middle
Ms. Sandra Lodge	-	Inman Middle
Ms. Patricia Beavers	-	King Middle School
Ms. Vanessa Alexander	-	Southwest Middle
Ms. Virginia Stanley	-	Sutton Middle
Ms. Beverly McKisic	-	Coan Middle
Mr. Ollie Dodson	-	Brown High
Ms. Rose Primus	-	Brown High
Ms. Frenchie Hodges	-	Carver High
Ms. Cora Foston	-	Carver High
Ms. Elease Gates	-	Crim High
Ms. Jill Beracki	-	Douglass High
Mr. James Woods	-	Douglass High
Ms. Nellie Graham	-	ISC
Ms. Mary Morris	-	Harper High
Ms. Miriam Stokes	-	Therrell High
Ms. Kay Scruggs	-	Therrell High
Mr. Jimmy Robinson	-	West Fulton High
Ms. Virginia Williams	-	West Fulton High
Ms. Gloria Wright	-	Mays High
Ms. Katie Linquist	-	Washington High School

III. Advisory Council

Dr. Asa G. Hilliard, III
Callaway Professor
Georgia State University

Mrs. Jean C. Young
City of Atlanta

Rev. Benjamin W. Bickers

Mrs. Xernona Clayton
Vice President Urban Affairs
Turner Broadcasting

Mrs. Ida Creal

Mr. Anthony F. Gilbert
Association for the Study of Classical African Civilizations

Mr. Yahya Hassan
Architect

Mr. Sidney Holston
Authentic Designs

Mr. Edward L. Keyton

Mrs. Brunetta Lucas
M. L. King Center for Nonviolent Social Change, Inc.

Rev. Charles Perry, AIRMICS
Georgia Institute of Technology

Mr. Terrell Simmons
Association for the Study of Classical African Civilizations

Bishop Woodrow Smith, Jr.
Shrine of the Black Madonna

Mrs. Ingrid Thomas
Queens of the Nile Productions

Mr. Obadele Williams
African Historian
Association for the Study of Classical African Civilizations

APPENDIX D

Sample Infusion Curriculum Learning Objectives

MATHEMATICS

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Objective
K		None
1	September	1. Recognize that people speak different languages in different parts of Africa. 2. Count from 1 - 5 in Swahili.
	October	3. Use Swahili numbers to add one-digit numbers with sums through 5.
	January	4. Recognize that all people have a system for counting. 5. Write Ancient Egyptian numerals from 1 - 5. 6. Write Hindu-Arabic numerals for ancient Egyptian numerals 1 - 5.
2	September	1. Count from 6 - 10 in Swahili. 2. Use Swahili numbers to add two one-digit numbers with sums through 10.
	October	3. Recognize that ancient Egyptians used symbols for numbers. 4. Identify ancient Egyptian numerals. 5. Order ancient Egyptian numbers from 1 - 10. 6. Identify different ways of finger counting. 7. Identify different coin combinations.
3	December	1. Identify Benjamin Bannaker as the creator of the first mechanical clock in the American colonies.
	February	2. Identify the first pyramid builders and tell where the first pyramids were built. 3. Identify a triangle, its sides, and corners. 4. Accurately construct a pyramid structure model.

Grade	Month	Objective
4	March	1. Identify Imhoptep's accomplishments. 2. Explain how a step pyramid is constructed. 3. Make pyramids using a variety of materials.
5	September	1. Verbally and visually identify numbers from one to ten in Swahili. 2. Verbally and visually identify sets of a given Swahili number. 3. Use Swahili numbers to demonstrate basic addition facts.
	May	4. Explain how the ancient Egyptians used the plumb bob or the pendulum. 5. Perform simple experiments using the pendulum. 6. Gather and record data from an experiment. Construct a bar graph on which to record data.

MATHEMATICS

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
GRADES 6-8

Grade	Month	Objective
6	October	1. Recognize that people speak different languages in different parts of Africa. 2. Count from 1-5 in Swahili. 3. Use Swahili numbers to add one-digit numbers with sums through 5.
	November	4. Identify Imhotep's accomplishments. 5. Explain how a step pyramid is constructed. 6. Make pyramids using a variety of materials.
7	October	1. Count from 6-10 in Swahili. 2. Use Swahili numbers to add two one-digit numbers with sums through ten. 3. Write Hindu-Arabic numerals for ancient Egyptian numerals from 1-5. 4. Recognize that ancient Egyptians used symbols for numbers. 5. Identify ancient Egyptian numerals. 6. Order ancient Egyptian numbers from 1-10, and identify different ways of finger counting.
8	October	1. Identify Benjamin Bannaker as the creator of the first mechanical clock in the American colonies. 2. Identify the first pyramid builders and tell where the first pyramids were built. 3. Accurately construct a pyramid structure model.

MATHEMATICS

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
HIGH SCHOOL

Course	Time	Objective
General Math I	Mid-Semester	1. Recognize that Africans helped to develop the mathematical sciences of arithmetic, algebra, geometry, and trigonometry. 2. Recognize that African architects and engineers helped to build pyramids and temples that are still standing today.
General Math II	Mid-Semester	Same as above.
General Math III	Mid-Semester	Same as above.
Math II	Mid-Semester	Same as above.
Math III	Mid-Semester	Same as above.
GBST Prep, Parts 1 and 2	Mid-Semester	Same as above.
Informal Geometry	Mid-Semester	Same as above.
Geometry	End-of-Semester	Same as above.
Advanced Algebra and Trigonometry	Mid-Semester	Same as above.
Pre-Algebra	End-of-Semester	Same as above.
Algebra I	End-of-Semester	Same as above.
Algebra II	Mid-Semester	Same as above.

MATHEMATICS SUPPLEMENT

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
HIGH SCHOOL

Course	Time	Objective
Mathematics I Mathematics II Mathematics III General Mathematics I General Mathematics II General Mathematics III	"Topics should be integrated into the regular mathematics curriculum where they most appropriately fit."	**Nile Valley Civilization** 1. Recognize that the foundation for our modern mathematics was developed in Africa. 2. Recall the fact that Africans were utilizing a variety of number concepts before records of numbers were made, and that these concepts were used thousands of years before writing was developed. 3. Identify one of the first systems developed for writing numbers (Egyptian hieroglyphics). Recall the fact that number systems were being developed in other parts of Africa also. 4. Recognize that the Egyptians developed a 365-day calendar. 5. Recall the fact that Egyptians divided a day into 24 hours. 6. Recognize the fact that the Egyptian number system included all of the basic concepts of computation, multiplication, division, addition, and subtraction. 7. Identify who invented the first operator symbol in mathematical history (Egyptians). Recognize the fact that this symbol was used for fractions.

Course	Time	Objective
Mathematics I Mathematics II Mathematics III General Mathematics I General Mathematics II General Mathematics III	"Topics should be integrated into the regular mathematics curriculum where they most appropriately fit."	**Hellenistic Period** 8. Assess the African influence upon Greek mathematics after Africa was invaded by the Greeks. 9. Recognize the fact that geometry was brought to Greece by Thales (c-600). 10. Recognize the fact that Pythagoras, Euclid, and others were also educated in Egypt. 11. Identify the first person to measure the circumference of the Earth accurately (Eratosthenes, an African). **Arab Influence** 12. Recall the fact that Arabic numerals were introduced to Europeans in the 9th century. 13. Recognize that the Nile Valley development was halted by the Turkish and Ottoman invasion while the growth of capitalism and industry in the city states of Europe gained power. 14. Recognize that universities functioned for some hundreds of years. South of the Sahara, after the demise of the Nile Valley. 15. Recall the fact that Timbuktu in Mali was an international center of learning in the 14-16th centuries. 16. Recognize that, in Mali, the book trade brought in more money than any other commodity.

Course	Time	Objective
Mathematics I Mathematics II Mathematics III General Mathematics I General Mathematics II General Mathematics III	"Topics should be integrated into the regular mathematics curriculum where they most appropriately fit."	**Arab Influence** (Cont'd) 17. Recognize that African people have developed higher level mathematics games dating back to antiquity. 18. Recognize that African countries were devastated by slavery and colonialism, resulting in the achievements made almost destroyed by a flood of misinformation and racism. **The Americas** 19. Recall the fact that the inventive spirit of Africans was never totally annihilated during the days of American slavery. 20. Recognize that the widespread use of the craft skills many slaves brought with them or learned opened the door to quantitative thinking and invention. 21. Although no Black inventors could secure patents before the 1870's, recall that at least 350 patents were given to African-Americans before 1900. 22. Recognize the fact that one of the few American mathematicians of the 18th century of any color was Benjamin Banneker (1731-1803), the son of a freed American. 23. Recognize the fact that NASA awarded its largest prize to date, the Space Act Award, to David R. Hedgley, an African-American mathematician, for his work in computer graphics.

SOCIAL STUDIES

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Topic	Objective
K	September	***(Everyone Is Special)*** Africans are the oldest people on earth.	1. Discuss two ways in which they themselves are special.
	October	***(Alike and Different: Thinking)*** African-Americans share a variety of physical traits but differ in appearance.	2. Recognize that people share a variety of physical traits but may differ widely in appearance. 3. Compare and contrast similarities and differences in people.
		(Social Studies Skills Development) Africans today practice both traditional and western lifestyles.	4. Recognize different customs and holidays celebrated in the same communities and around the world.
	November	***(We Need Love)***	5. Assess family and friends as sources of love.
		(Helping Others) African-Americans play important roles as community helpers.	6. Analyze why people help one another.
	December	***(Our Neighborhod and Friends)*** African-Americans play important roles as community helpers.	7. Identify four service workers.
		(First, Next, and Last: Time Skills) The earliest known civilization was found on the continent of Africa.	8. Relate the proper order of events in a sequence. 9. Utilize the words first, next, or last to sequence events.
	January	***(Near and Far: Map and Globe Skills)*** The earliest known civilization was found on the continent of Africa.	10. Use the words near and far to describe the position of people and objects.
	February	***(Land and Water)*** The continent of Africa has the oldest natural features.	11. Categorize mountains, beaches, forests, plains, deserts, and lakes.

Grade	Month	Topic	Objective
K (Cont'd)	March	***(What Can We See? Thinking Skills)*** African history must be viewed in the context of its relationship to world history.	12. Explain why it is important to look at the world around us.
	April	***(The Earth, Our Home: Map and Globe Skills)*** The earliest known civilization was found on the Continent of Africa.	13. Explain that a globe shows where places are on earth. 14. Point out between land and water on a globe.
		(Social Science Skills Development) African-Americans play important roles as community helpers.	15. Give examples of division of labor in homes, schools, and communities. 16. Name and describe the roles of community helpers.
		African history is located in all media materials.	17. Locate information in a variety of sources.
		The calendar was introduced in 4241 B.C. in Africa.	18. Recognize and use a calendar.

SOCIAL STUDIES

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Topic	Objective
1	September	***(Living with Other People)*** Human development occurred almost exclusively in Africa. The earliest organized societies existed in Africa. ***(Every Family Is Different/Our Families Give Us Names)*** Africans today practice both traditional and Western lifestyles.	1. Associate sharing, helping, and caring as ways they have learned to get along with others. 2. Describe what a family is. 3. Point out at least two ways in which families may be different. 4. Recognize that families satisfy the need for homes. 5. Describe at least two different kinds of places in which families live.
	November	***(Understanding Maps and Symbols: Map and Globe Skills)*** The earliest known civilization was found on the Continent of Africa.	6. Define a map as a picture of a place. 7. Recognize map symbols as small drawings of real things. 8. Explain what information a map key gives. 9. Use the symbols on a map to answer questions about the map. 10. Locate things on a map by using the symbols in a map key.
	December	***(People Have Needs/People Have Wants)*** Africans today practice both traditional and Western lifestyles.	11. Define needs as things people must have. 12. Identify the basic needs as shelter, food, water, and clothing. 13. Define wants as things people would like to have.

Grade	Month	Topic	Objective
1 (Cont'd)	January	***(Working for What We Need and Want))*** African-Americans play important roles as community helpers.	14. Evaluate different ways of working.
			15. Interpret services as jobs that help other people.
		African-Americans played key roles in the development of products used today.	16. Relate goods as things people make.
			17. Compare and contrast at least four workers who provide services and at least four workers who make goods.
		(Reading a Map: Map and Globe Skills) The earliest known civilization was found on the Continent of Africa.	18. Determine places on a map.
			19. Describe the location of places on a map.
	March	***(Our Country and the World/How Are People Alike?)*** African-Americans share a variety of physical traits but differ in appearance.	20. Propose three ways in which the people of every country differ.
			21. Name five ways in which people are alike.
		(The Changing World)	22. Discuss three ways in which the world is always changing.
		(Holidays Around the World) Africans today practice both traditional and Western lifestyles.	23. Identify four holidays celebrated in different countries.
	April	***(The American People)*** African-Americans were major contributors in the New World 100 years before they reappeared as slaves in 1619.	24. Recognize that Americans live in the United States.

SOCIAL STUDIES

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Topic	Objective
2	September	***(Busy Neighborhoods/Neighborhoods Change and Grow)*** The earliest organized societies existed in Africa.	1. Define a neighborhood as a place where people live and work. 2. Identify working, shopping, and having fun as three things people do in neighborhoods. 3. Relate at least two places where people might have fun in a neighborhood. 4. Compare pictures of a neighborhood long ago and now to identify changes. 5. Specify two reasons why neighborhoods change.
	October	***(Neighborhoods Are Different)*** The earliest organized societies existed in Africa. ***(Symbol and Map Keys: Maps and Globe Skills)*** The earliest known civilization was found on the Continent of Africa.	6. Indicate two ways in which neighbors may be different from each other. 7. Give examples of how neighbors learn from each other, share with each other, and help each other. 8. Explain what symbols in a map key are. 9. Use the symbols in a map key to answer questions about the map.
	November	***(Neighbors Solve Problems)*** The earliest organized societies existed in Africa. African-Americans play important roles as government officials.	10. Describe how groups work together to solve problems. 11. Point out why groups need leaders.

Grade	Month	Topic	Objective
2 (Cont'd)	December	***(Working for What We Need and Want)*** Africans today practice both traditional and Western lifestyles.	12. Define wants as things that people would like to have.
			13. Give at least two examples of wants.
		(Workers Who Give Services) African-Americans play important roles as community helpers.	14. Point out at least four examples of jobs in which people give services.
	January	***(Workers Who Make Goods)*** African-Americans play key roles in the development of products used today.	15. List at least four jobs that people who provide goods might have.
	February	***(Social Studies Skills and Concepts)*** African-Americans play important roles as community helpers.	16. Discuss the role of transportation and communication helpers.
			17. Use art, music, and literature to reflect the heritage of the American society.
		The earliest organized societies existed in Africa.	
	March	***(Our Holidays: Time Skills)*** Africans today practice both traditional and Western lifestyles.	18. Match at least four holidays with the months in which they fall.
	April	***(The Earth Is Our Home)*** Many countries around the world are dependent on products and resources from the Continent of Africa.	19. Define resources as things from the Earth that people use.
			20. Choose three resources and explain what they might be used for.
			21. Decide the importance of not wasting resources.
		(The Earth's Continents/Places Around the Earth) The earliest known civilization was found on the Continent of Africa.	22. Name at least three continents.
			23. Examine important climatic and geographic features of each of the seven continents.

SOCIAL STUDIES

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Topic	Objective
3	September	***(Why People Live in Communities)*** The earliest organized society existed in Africa.	1. Determine what is meant by community.
			2. Specify groups and places where people have fun in a community.
		(Communities Help People Meet Needs) African-Americans play important roles as community helpers.	3. List three needs that communities help their members meet.
			4. Compile three ways in which our health and safety needs are met by the community.
	October	***(Close Up: Native Americans)*** Africans today practice both traditional and western lifestyles.	5. Compare the customs and lifestyles of native Americans in the history of our country.
	December	***(Water and Our Communities)*** The 4,000 mile-long Nile River, which flows south to north, became Africa's first cultural highway.	6. Identify the advantages of living in a community located near water.
		(Close Up) African-Americans played key roles in the development of products used today.	7. Paraphrase economics as how goods, services, and money are traded back and forth.
	January	***(How Government Works)*** African-Americans play important roles as government officials.	8. Define government as a group of people who make laws and see that they are obeyed.
	February	***(Community Services Protect Us)*** African-Americans play important roles as community helpers.	9. Explain why communities provide services.
		(How Communities Begin) The earliest organized societies existed in Africa.	10. Verify three possible reasons why communities began in particular places.
			11. Consider two reasons why communities begin today.

Grade	Month	Topic	Objective
3 (Cont'd)	March	***(A New Country is Born)*** African-Americans played important roles in the American Revolution.	12. Tell the result of the American Revolution.
		(The New Nation Grows)	13. Research and report to class on any of the following subjects: Harriette Beecher Stowe, Harriette Tubman, Frederick Douglass, Underground Railroad. (Gifted and Talented)
	April	***(Clothing Around the World)***	14. Research and write about the African "Kente Cloth Banner." Report to class. Draw pictures or bring one in for display. (Gifted and Talented)
		(Shelters Around the World)	15. Identify three materials that are used to make shelters. 16. Tell why ways of building shelters vary. 17. Describe three kinds of shelters and the climates in which they are built.
	May	***(Governments and Services Around the World)*** Africans today practice both traditional and western lifestyles.	18. Compare three services provided by communities around the world.
		(Close-Up Celebration Around the World) Africans today practice both traditional and western lifestyles.	19. Describe ways in which people celebrate holidays in other parts of the world, including China, Poland, Israel, Sweden, and Mexico.

SOCIAL STUDIES

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Topic	Objective
4	September	***(Americans Come From Many Places)*** African-Americans made significant accomplishments in the areas of discoveries and exploration.	1. Identify five areas from which settlers came. 2. Explain why people immigrated to America and to Georgia.
		African-Americans made outstanding contributions to American culture.	3. Locate the countries from which their ancestors came and connect those countries with America on a map (Gifted and Talented).
		(Americans Are Different in Many Ways) African-Americans share a variety of physical traits but differ in appearance.	4. List four ways in which Americans are different.
		(Americans Share Many Things)	5. Make a list of all rights guaranteed to all Americans and explain these rights.
	October	***(Rivers, Land, and People/Rivers Change the Land)*** The 4,000 mile long Nile River, which flows from south to north, became Africa's first cultural highway.	6. Give two reasons why rivers have always been important to people. 7. Examine two things common to all rivers. 8. Explain how a river is formed. 9. Tell what the beginning and end of a river is called. 10. Give three examples of how rivers change the land around them.
		(Using Latitude and Longitude: Maps and Globe Skills)	11. Determine the locations of places in specific hemispheres of the Earth.

Grade	Month	Topic	Objective
4 (Cont'd)	November	***(North American Deserts)*** The world's largest desert, the Sahara, is located on the Continent of Africa.	12. Relate how all deserts are alike. 13. Name two desert plants and explain how they survive. (Gifted and Talented)
		(Using Intermediate Directions: Map and Globe Skills) The earliest known civilization was found on the Continent of Africa.	14. Specify the four intermediate directions. 15. Use intermediate directions to locate places on a map.
	December	***(The Southeast Long Ago)*** The greatest destroyer of African culture was the plantation system.	16. Explain what plantations were. 17. Make a chart to include the following information: Special events or holidays in each state of the Southeast; description of the special celebrations and what these celebrations tell us about the state. (Gifted and Talented)
		(The Great Lakes States Long Ago) African-Americans made significant accomplishments in the areas of discoveries and exploration.	18. Identify Jean DeSable and explain his role in the settlement of the Great Lakes region.
	January	Estevanice, an African, was responsible for opening up New Mexico and Arizona territories.	19. Give two reasons for the early settlement of Santa Fe, New Mexico. 20. Outline how Texas became a colony of Mexico, an independent counry, and finally a state of the United States.
		(The Southwest Today)	21. Pretend you are a tour guide and develop a tour guide "talk paper" on one of the natural beauties of the Southwest. (Gifted and Talented)

Grade	Month	Topic	Objective
4 (Cont'd)	February	***(California)***	22. Explain why Junipero, Serra, is important in California's history.
		(Using Population Maps)	23. Use a population map to tell how many people live in different areas.
		(People Depend on One Another) African-Americans play important roles as community helpers.	24. Explain how specialization helps people meet their needs.
		African-Americans played key roles in the development of products used today.	25. Classify producers as people who make goods or provide services.
			26. Consider consumers as people who spend money to buy things.
			27. Explain how producers and consumers are interdependent.
		(Regions Depend on One Another)	28. Analyze how transportation makes possible interdependence between regions.
		(Using Time Zones: Map and Globe Skills)	29. Figure out the time in one zone, given the time in another.
		(Making Choices: Thinking Skills) African-Americans play important roles as government officials.	30. Explain how leaders in government make choices.
		(How Government Works)	31. Give two reasons why the Constitution is important to Americans.
		(State and Local Governments)	32. Compare the three branches of state government.

Grade	Month	Topic	Objective
4 (Cont'd)	March	***(Major Rivers of the World)*** The 4,000 mile long Nile River, which flows from south to north, became Africa's first cultural highway.	33. Trace the course of the Nile River. 34. Tell how people use the Nile River.
		(Nanking, City on the Yangtze River)	35. Give three examples of how people live in Nanking.
		(Mountain Regions of the World)	36. Locate the Alps, the Atlas Mountains, and the Himalayas. 37. Tell how people make their living in each of these mountain regions. 38. Describe what it is like to live in the Atlas Mountains. Tell about the houses, clothing, food, customs, work, etc.
		(Desert Regions Around the World) The world's largest desert, the Sahara, is located on the Continent of Africa.	39. Locate the Sahara, the deserts of the Arabian Peninsula, the Australian Desert, and the Gobi. 40. Tell how people live in each desert region.
		(Social Studies Skills and Concepts) African-Americans influence Georgia Government -- past and present.	41. Appraise the contributions and cultural influence of native Americans in Georgia's early history.
	April	After the Civil War, Congress prohibited slavery in the territories.	42. Distinguish Georgia's symbols and observances, indicating their importance to our heritage.
		Many famous African-Americans are native Georgians.	43. Group famous Georgians and cite accomplishments made by them.
		(Plain Regions of the World)	44. Describe the location of the Carodian Plains, the plains of Kenya, and the plains of the Soviet Union. 45. Determine the climate of each of the plain's regions. 46. Tell the major uses of the land in each plain's region.

SOCIAL STUDIES

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Topic	Objective
5	October	***(Lief Erikson Sails to Vinlane)*** Africans were major contributors in the New World 100 years before they reappeared as slaves in 1619.	1. Decide who established the earliest European settlement in America.
		(Skills for Success: Using Historical Maps) The earliest known civilization was found on the continent of Africa.	2. Use a key to identify routes and natural features on a map. 3. Trace routes on a map. 4. Derive historical facts from a map.
		(Europeans Look to Asia)	5. Determine why Europeans were interested in Asia.
		(Christopher Columbus)	6. Assess what Columbus was seeking and what he found. 7. Identify and define problems Columbus may have encountered during his trip to America. (Gifted and Talented)
		(Skills for Success: Using Charts and Tables)	8. Design a flow chart showing Africans' movement from Africa to America during slavery.
	November	***(Geography and Towns of New England)***	9. List three examples that show the importance of religion in New England.
		The greatest destroyer of African culture was the plantation system.	10. Analyze the slave trade. 11. Describe the slave trade route.
		Colonial New York City	12. Describe four kinds of skilled workers who came from Germany to Pennsylvania.

Grade	Month	Topic	Objective
5 (Cont'd)	November	*Benjamin Franklin*	13. Explain the life of an apprentice.
			14. Name two inventions by Franklin.
		The greatest destroyer of African culture was the plantation system.	15. Justify how the South's geography affected the development of plantations.
			16. Document the economy of a Southern plantation.
		(Slavery of the South) By the end of the 17th Century, Europeans saw in African manpower the means to secure free labor for the building of the Americas.	17. Name three reasons for the increase of slavery in the South.
			18. List three reasons for the injustices of slavery.
			19. Recognize three forms of expression that slave feelings took.
		African-Americans are responsible for many inventions used today.	20. Discuss the many accomplishments of Benjamin Banneker.
	December	***C(ause and Effect: Thinking Skills)***	21. Make a cause-and-effect chart of an historical event. (Gifted and Talented)
		(Americans fight for liberty)	22. Compare the contributions of women and Europeans in the war.
	January	***(Understanding the Bill of Rights)***	23. Write how our lives might be different if each amendment were not there to protect our rights. (Gifted and Talented)
		(Growth of Manufacturing)	24. Working in groups, research and tell of other Black inventors and their inventions.
		(Figuring Out Time and Distance: Map and Globe)	25. Use a chart and map to determine the number of days a journey would take given estimated mileage for certain modes of transportation.

Grade	Month	Topic	Objective
5 (Cont'd)	February	***(Division Between North and South)*** African-Americans aided in the cause of abolition.	26. Write one important economic difference between the North and the South.
			27. Indicate the Southern position on slavery after 1832.
			28. Discuss Frederick Douglass.
			29. Explain the Underground Railroad.
			30. Critique the works of Sojourner Truth.
			31. Read and compare Sojourner Truth and Harriet Tubman's accomplishmens and actions. (Gifted and Talented)
		(The Extension of Slavery) Resistance to slavery and colonialism existed throughout the 17th and 18th centuries.	32. Compare the Northern and Southern points of view regarding the extension of slavery.
			33. Specify two compromises between the North and the South.
			34. Verify what the Kansas-Nebraska Act said.
		In 1956, the Dred Scott decision opened all territories to slavery.	35. Demonstrate why the Dred Scott case was important in the debate over slavery.
		(The Fighting Begins)	36. Tell what the slaves were feeling during this time. (Gifted and Talented)
		(Plans, Strengths of Each Side)	37. Research the part Blacks played in the war and write an essay. (Gifted and Talented)
		(The First Part of the War)	38. Research and tell about Black soldiers' participation in the Civil War. (Gifted and Talented)
		(Reconstruction in the South) After the Civil War, African-Americans participated in state and national politics.	39. Relate three problems faced by the nation at the end of the Civil War.
			40. Describe three functions of the Freedman's Bureau.
			41. Point out what Jim Crow laws were.

Grade	Month	Topic	Objective
5 (Cont'd)	February	***(New Technology, New Inventions)***	42. Identify two Black inventors and describe the use of their inventions. (Gifted and Talented)
		(Using Time Zones: Map and Globe Skills)	43. Name the four main time zones in the United States and Africa.
	March	***(Transportation and Resource Maps: Map and Globe Skills)***	44. Utilize historical maps to compare transportation routes at two different time periods.
		(The Jazz Age) Music from the African and African-American tradition has had an influence on music throughout the world.	45. Discuss two traditions from which jazz came.
	April	***(The Struggle for Civil Rights)*** 20th Century African-Americans played key roles in the fight for civil rights.	46. Show how Rosa Parks challenged segregation. 47. Define what civil rights are. 48. Explain what nonviolence meant to Martin Luther King, Jr.
		(Technology in the Space Age) African-Americans made significant accomplishments in the areas of discoveries and exploration.	49. Name the first Black astronaut and the Black astronaut who died in the Challenger explosion.
		(The 1980's and the Future)	50. List three challenges the United States faces in the future.
		(Reading and Road Map: Map and Globe Skills) The earliest known civilization was found on the continent of Africa.	51. Point out a map scale to measure distance on a map. 52. Explain symbols in a map key.

LANGUAGE ARTS

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
GRADES 2, 4, 7

Grade	Month	Concept	Objective
2	August and September	Literature	1. "All literature objectives are appropriate for infusing African-American concepts into the curriculum when they are applied to African-American literature."
			2. A Suggested Book List can be found at the end of each CLO document identifying books which focus on an aspect of the African/African-American experience and/or feature African-Americans as the principal characters. A brief annotation of each of the identified books is also included.
		Literary Appreciation	3. Read, listen to, and/or view variety of literature including African-American related literature (folk tales and poetry from the past; present-day fiction, non-fiction, poetry, and plays).
		Literary Classification	4. Identify different forms of literature: poetry.
		Literary Interpretation	5. Relate events and characters in story to his/her own life experiences.
		Concept Vocabulary	6. Unit 4: Robert, Who Is Often a Stranger to Himself (stranger, reflection, looking glass, mirror, image).
	December	Literary Classification	7. Recognize different forms of literature: realistic story.
4	August and September	Literary Appreciation	1. Read, listen to and/or view a wide variety of literature including African-American related literature.
	October	Literary Classification	2. Recognize different forms of literature: realistic fiction (Little Vic's Greatest Race).
		Vocabulary	3. Little Vic's Greatest Race (Career Awareness Content)

Grade	Month	Concept	Objective
7	August and September	Comprehension/Critical Thinking	1. Apply comprehension/ critical thinking skills beyond the basal to grade level content area materials and children's literature selections including African-American literature.
		Literary Appreciation	2. Read, listen to, and/or view a wide variety of literature including African-American related literature (traditional folk literature and poetry; contemporary fiction, non-fiction, poetry, and drama.)
		Literary Classification	3. Recognize different forms of literature: biography (fictionalized) -- Flight to Freedom.
		Vocabulary	4. Unit 2: Flight to Freedom (Social Studies Content).
	October	Literary Classification	5. Recognize different forms of literature: realistic fiction -- The Tunnel.
		Vocabulary	6. Unit 6: The Tunnel.
	November	Literary Classification	7. Recognize different forms of liteature: poetry -- Song of an Unlucky Man.
		Literary Interpretation	8. Recognize the importance of the oral tradition in African-American literature.
	January	Literary Classification	9. Recognize different forms of literature: realistic fiction -- A Horse for Reg; fable -- The King of the Frogs.
		Literary Interpretation	10. Recognize the importance of the oral tradition in African literature.
		Vocabulary	11. Unit 11: A Horse for Reg.
			12. Unit 11: The King of the Frogs.

SCIENCE

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-5

Grade	Month	Objective
K	September	To identify animals that live on the plains and in the forests of Africa.
1	October	To associate specific animals with specific habitats in Africa.
2	October	1. To list products made from plants by Dr. George Washington Carver. 2. To discuss the effect of Dr. George Washington Carver's discoveries on the economy of the South.
3	February	To identify bodies in the solar system used by ancient Africans to determine direction.
4	April	To describe uses man makes of plants in the area of medicine.
5	February	To relate knowledge of changes in the position of stars to daily activities.

SCIENCE

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
HIGH SCHOOL

Course	Time	Objective
Biology	September	1. To state major advancements in biology during three periods of history: 15-19th centuries; 20th century; ancient times. 2. To state the contributions of Robert Hooke, Schleiden, Schwann, and Ernest Just to the study of cytology.
Physical Science		- -
Chemistry		- -
Human Biology		- -

MUSIC

CURRICULUM LEARNING OBJECTIVES
INFUSION OF AFRICAN AND AFRICAN-AMERICAN STUDIES
K-7

Grade	Month	Concept	Objective
K (1st Semester)	November	Melody	1. Sing songs from the Black experience.
	December	Expressive	2. Identify by sight and sound the various classroom instruments.
			3. Create instrumental accompaniments.
			4. Respond to music using rhythm and melody instruments.
		Melody	5. Sing songs from the Black experience.
	January	Melody	6. Sing songs from the Black experience.
		Expressive	7. Use different dynamic levels in singing and listening.
1	October	Melody	1. Sing songs from the Black experience.
	November	Melody	2. Participate in singing games and dramatizations.
	January	Melody	3. Sing songs from the Black experience.
		Harmony	4. Discriminate between harmony and no harmony or one voice and several voices.
		Form	5. Demonstrate awareness of phrase changes through movement.
	March	Melody	6. Sing songs from the Black experience.
		Rhythm	7. Echo short rhythm patterns.
			8. Clap the rhythm of a melody.
			9. Identify rhythmic patterns.

Grade	Month	Concept	Objective
1 (Continued)	April	Melody	10. Sing songs from the Black experience.
		Rhythm	11. Differentiate between long and short sounds.
			12. Sing and play ostinato patterns.
	May	Melody	13. Sing songs from the Black experience.
		Rhythm	14. Sing, play, and move to the steady beat.
	June	Melody	15. Sing songs from the Black experience.
			16. Identify movement of tones as upward, downward, or the same.
			17. Demonstrate melodic direction by singing, playing, or describing.
		Rhythm	18. Sing, play, and move to the steady beat.
		Form	19. Demonstrate awareness of phrase changes through movement.
3	September	Harmony	1. Distinguish between songs in unison and harmony.
			2. Sing two-part rounds, descants, countermelodies, and harmonized endings.
			3. Accompany singing using the autoharp and chord indications.
		Melody	4. Sing songs from the Black experience.
		Rhythm	5. Participate in simple folk dances and interpretive movements.
			6. Create rhythmic patterns through singing and playing.

Grade	Month	Concept	Objective
3 (Continued)	October	Rhythm	7. Sing, move, and play using various tempos.
			8. Participate in simple folk dances and interpetive movement.
		Melody	9. Sing on pitch with attention to good tone quality and diction.
			10. Sing and listen to songs from the Black experience.
			11. Play tunes/phrases on the recorder or melody bells.
			12. Recognize notation for scale patterns and chords.
	December	Melody	13. Sing and listen to songs from the Black experience.
		Form	14. Show phrase changes through movement.
			15. Associate letters, shapes, or symbols with phrase changes.
			16. Use geometric shapes to describe the form of songs and listening selections.
		Affective	17. Participate in independent and group activities.
		Melody	18. Play melodic and chordal patterns from ear and from notation.
			19. Sing two-part rounds, descants, countermelodies, and harmonized endings.
		Rhythm	20. Read notation of simple rhythmic patterns.
		Harmony	21. Play ostinati on varied instruments.
		Expressive	22. Identify music of various cultures/styles through singing and listening.

Grade	Month	Concept	Objective
5	September	Rhythm	1. Read and interpret music terminology used to denote tempo changes.
		Melody	2. Sing songs from the African-American heritage.
		Expressive	3. Recognize the characteristics of African-American and other ethnic musics.
	October	Rhythm	4. Play African rhythms on appropriate instruments.
		Form	5. Demonstrate the African-American pattern of call and response.
		Rhythm	6. Participate in folk dances, musical games, and creative movement.
		Expressive	7. Recognize the characteristics of African-American and other ethnic musics.
		Harmony	8. Differentiate between monophonic and polyphonic textures.
	November	Form	9. Demonstrate the African-American pattern of call and response.
		Melody	10. Sing and recognize major, minor, and pentatonic scales or patterns.
		Form	11. Use knowledge of same, similar, and different phrases to sing a song.
		Melody	12. Sing songs from the African-American heritage.
		Harmony	13. Sing two- and three-part songs from notation.
		Form	14. Discover and identify cadences as phrase endings.

Grade	Month	Concept	Objective
5 (Continued)	December	Expressive	15. Identify, aurally and visually, the band/orchestra.
			16. Identify, aurally and visually, a variety of folk instruments.
			17. Discuss musical concepts.
6	September	Expressive	1. Discriminate among the timbres of band, orchestra, ethnic instruments and voices.
			2. Discuss the transfer of African musical elements to Brazilian and Caribbean cultures.
		Melody	3. Sing African-American songs as an expression of cultural heritage.
	October	Melody	4. Play melody or counter-melody on recorder, bells, or piano.
			5. Sing African-American songs as an expression of cultural heritage.
		Expressive	6. Recognize the characteristics of African-American and other ethnic musics and instruments.
	December	Expressive	7. Discuss the transfer of African musical elements to Brazillian and Caribbean cultures.
		Melody	8. Sing African-American songs as an expression of cultural heritage.
	January	Melody	9. Sing African-American songs as an expression of cultural heritage.
			10. Identify, aurally, major and minor tonalities.
		Expressive	11. Recognize the characteristics of African-American and other ethnic musics and instruments.

Grade	Month	Concept	Objective
7	September	Melody	1. Sing African-American songs as an expression of cultural heritage.
		Expressive	2. Discuss the transfer of African musical elements to Brazilian and Caribbean cultures.
		Rhythm	3. Perform African-American and other polyrhythms.
			4. Discuss rhythmic characteristics of music heard and associate them with specific styles.
	October	Expressive	5. Recognize the characteristics of African-American and other ethnic musics and instruments.
			6. Identify the vocal tone qualities used in various types of singing.
	November	Melody	7. Sing African-American songs as an expression of cultural heritage.
		Expressive	8. Recognize the characteristics of African-American and other ethnic musics and instruments.
			9. Identify the vocal tone qualities in various types of singing.
	December	Expressive	10. Recognize the characteristics of African-American and other ethnic musics and instruments.
			11. Explore the variety of tone colors that may be produced by playing or singing in different ways.
			12. Perform music with attention to the expressive symbols of notation.

Grade	Month	Concept	Objective
7 (Continued)	January	Melody	13. Sing African-American songs as an expression of cultural heritage.
			14. Recognize the characteristics of African-American and other ethnic music and instruments.
			15. Identify composers, performers, conductors, and small and large ensembles.
		Rhythm	16. Discuss rhythmic characteristics of music heard and associate with specific styles.
		Melody	17. Create and notate original melodies and improvisations.

APPENDIX E

National Scholars

APPENDIX E

National Scholars

Dr. John Henrik Clarke, Social Studies
Dr. Ivan Van Sertima, Science
Dr. Wyatt Tee Walker, Music
Dr. Rosalind Jeffries, Art
Mrs. Abena Walker, Pedagogy
Dr. Charsee McIntyre, Music
Dr. Charles Finch, Theology
Mr. Obadele Williams, History and Pedagogy
Dr. Charles Copher, Theology
Dr. Arthur Lee, Social Studies
Dr. Joi Hardeman, Literature
Mr. Askia Toure, Literature
Mr. Michael Harris, Art
Mrs. Joyce Harris, Language Arts
Mr. Hunter Adams, III, Mathematics/Science
Mrs. Carolyn Leonard, Methodology
Dr. Carl Spight, Science/Mathematics
Dr. Barbara Sizemore, Education

Dr. Asa Hilliard III, Chief Consultant